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Patent Claims

1. A process for preparing a compound of general formula (I),

$$R^2$$
 O O

wherein

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 R^1 is a $C_1\text{-}C_8\text{-alkyl},\,C_6\text{-}C_{10}\text{-aryl-}C_1\text{-}C_4\text{-alkyl}\,$ or $C_3\text{-}C_8\text{-cycloalkyl-}C_1\text{-}C_4\text{-alkyl}\,$ group, and

R2 is a C1-C8-alkyl group,

comprising:

reacting a) a ketone of formula (II)

$$R^1$$
 R^2

wherein R1 and R2 are as hereinbefore defined,

with an acetoacetate in the presence of a strong base

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b) cyclising the resulting compound of formula (IV)

$$\mathbb{R}^1$$
 \mathbb{R}^2 \mathbb{R}^2 \mathbb{R}^3

wherein

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R³ denotes a C₁-C₄-alkyl or benzyl group,

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by means of a base, wherein a compound of formula II is continuously mixed and reacted with an acetoacetate in the form of its dianion in a microreactor, and subsequently isolating the product compound of the general formula (I).

2. The process according to claim 1, wherein a microreactor with an interdigital channel structure is used for reaction step a).

- 3. The process according to claim 2, wherein a current of educt A containing the compound of formula (II) and a current of educt B containing the acetoacetate in the form of its dianion are continuously mixed together in the mixing element of a microreactor and the liquid reaction mixture is passed into a holding capillary.
 - The process according to claim 3, wherein the capillary is 0.1 to 10 m long and 0.05 to 5 mm in diameter.
 - 5. The process according to claim 4 wherein 1-phenyl-3-hexanone is used as the compound of formula (II) in step a).
 - The process according to claim 5, wherein step a) the acetoacetate is used in the presence of at least 2 equivalents of a strong base selected from sodium hydride. butyllithium and lithium dialkylamide.
- 7. The process according to claim 6, wherein the acetoacetate is added to the compound of formula (II) in a molar ratio of 2:1 to 1:2.
 - 8. The process according to claim 7 wherein the reaction in step a) is carried out at a temperature of –78 to +85 °C.
- 30 9. The process according to claim 8, wherein the reaction in step a) is carried out at an overall flow rate of 1.5 to 5 ml/min.
 - 10. The process according to claim 9, wherein the flow rate of the compound of formula (II) to the compound of formula (III) is in a ratio of 1:1 to 1:2.
 - 11. The process according to claim 10 wherein the reaction is carried out in a plurality of microreactors connected in series or in parallel.